

Corpus Christi Ship Channel
**Channel Improvement
Project**

**“Dredged Materials Management/Beneficial Use Plan for the
Corpus Christi Ship Channel Channel Improvement Project”**

**MARINE TRANSPORTATION SYSTEM RESEARCH AND
TECHNOLOGY COORDINATION CONFERENCE**

November 15, 2001



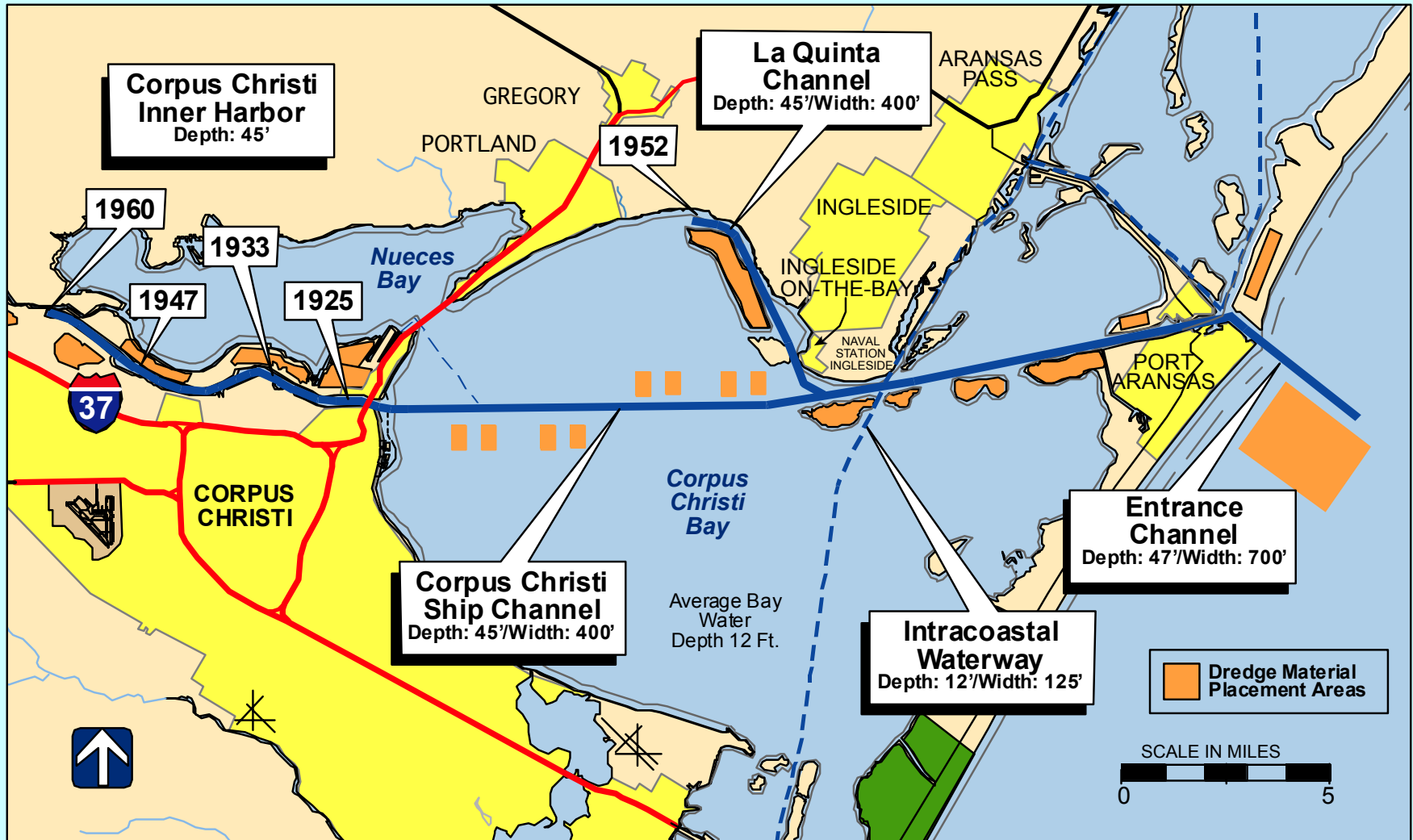
**US Army Corps
of Engineers**
Galveston District



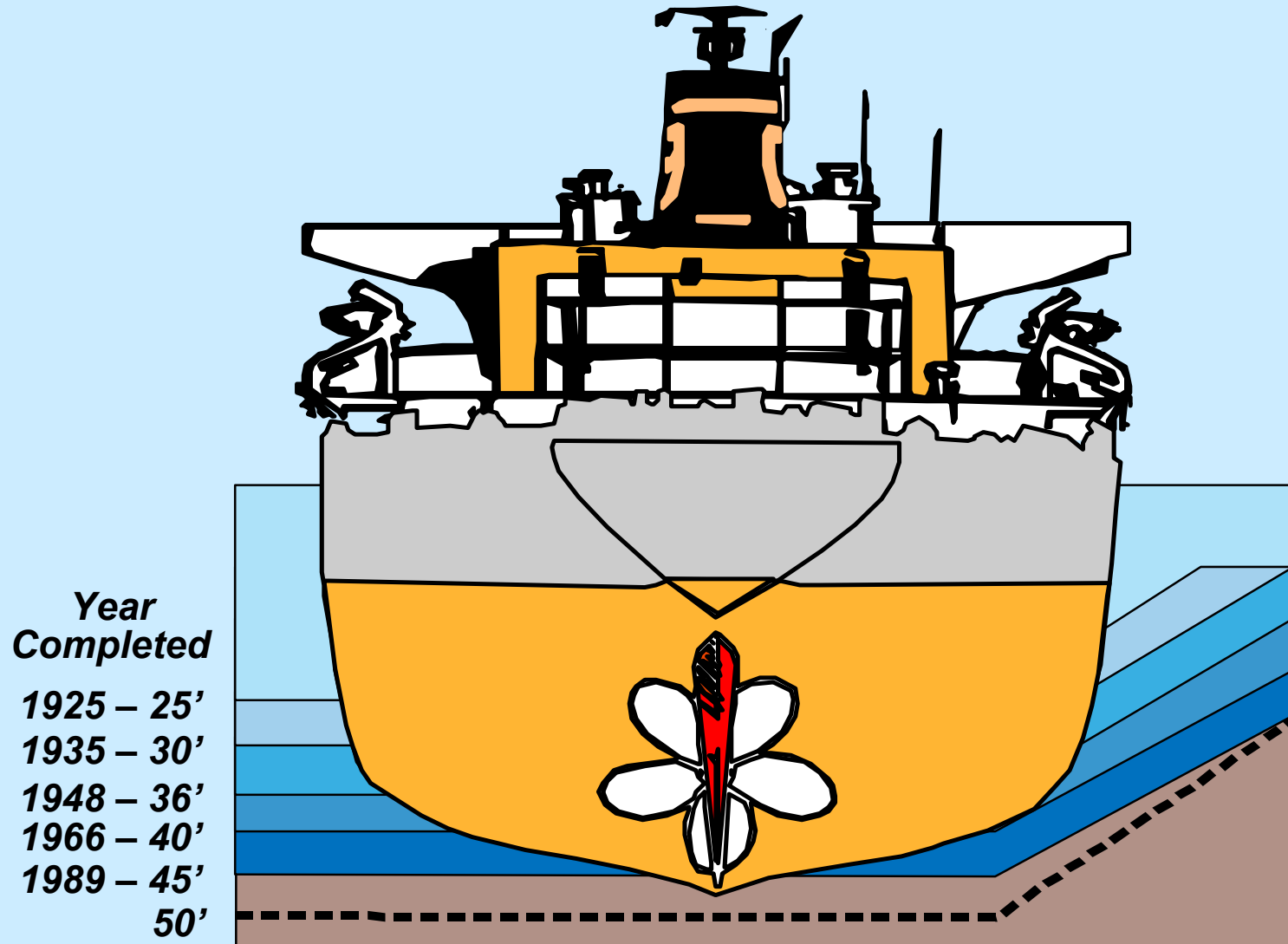
BACKGROUND

- Existing Channel System
- Recommended Plan
 - Feasibility Report Studies
 - Construction Costs / Benefits
- Dredge Material Management/ Beneficial Use Plan - Recommended Plan

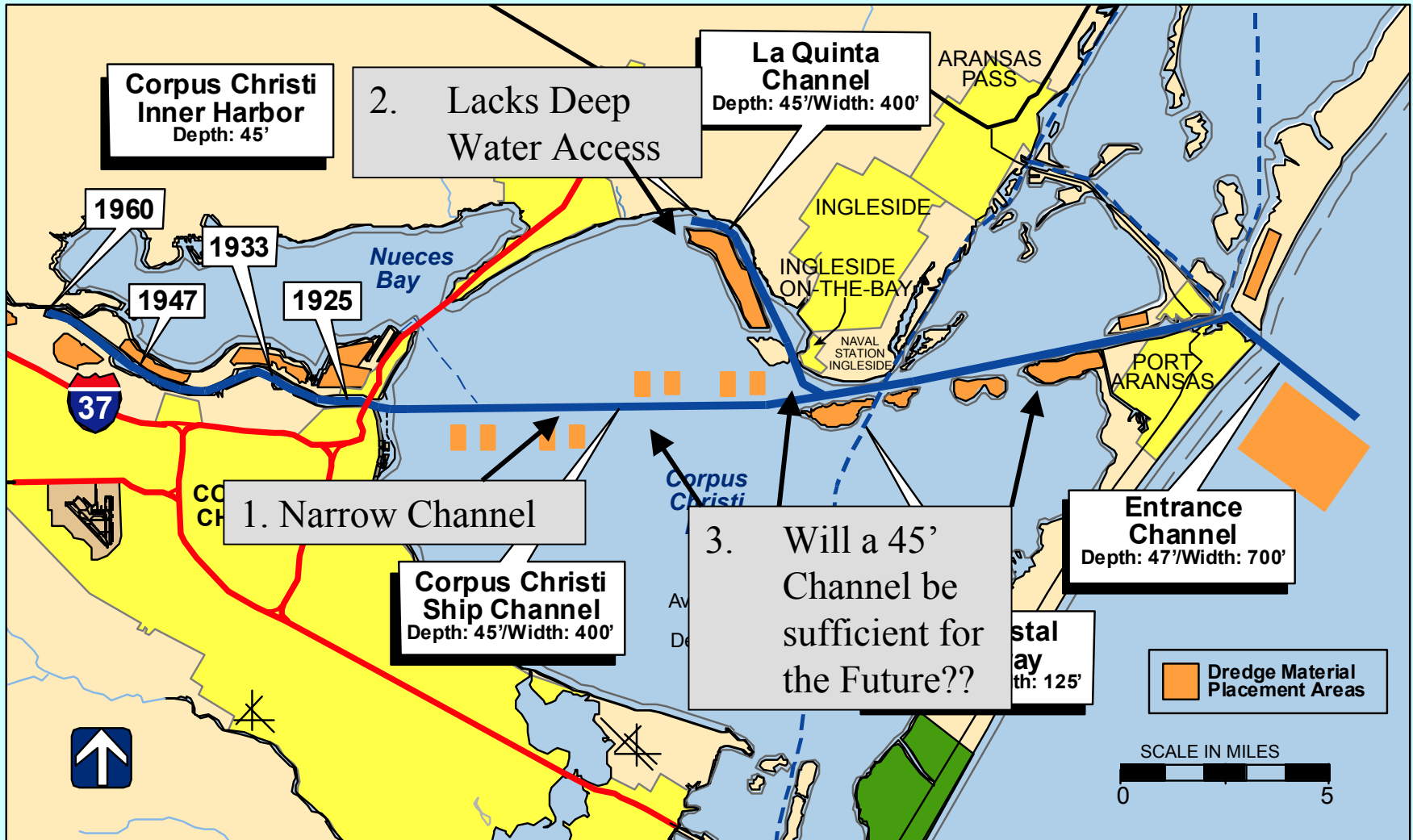
EXISTING CHANNEL SYSTEM



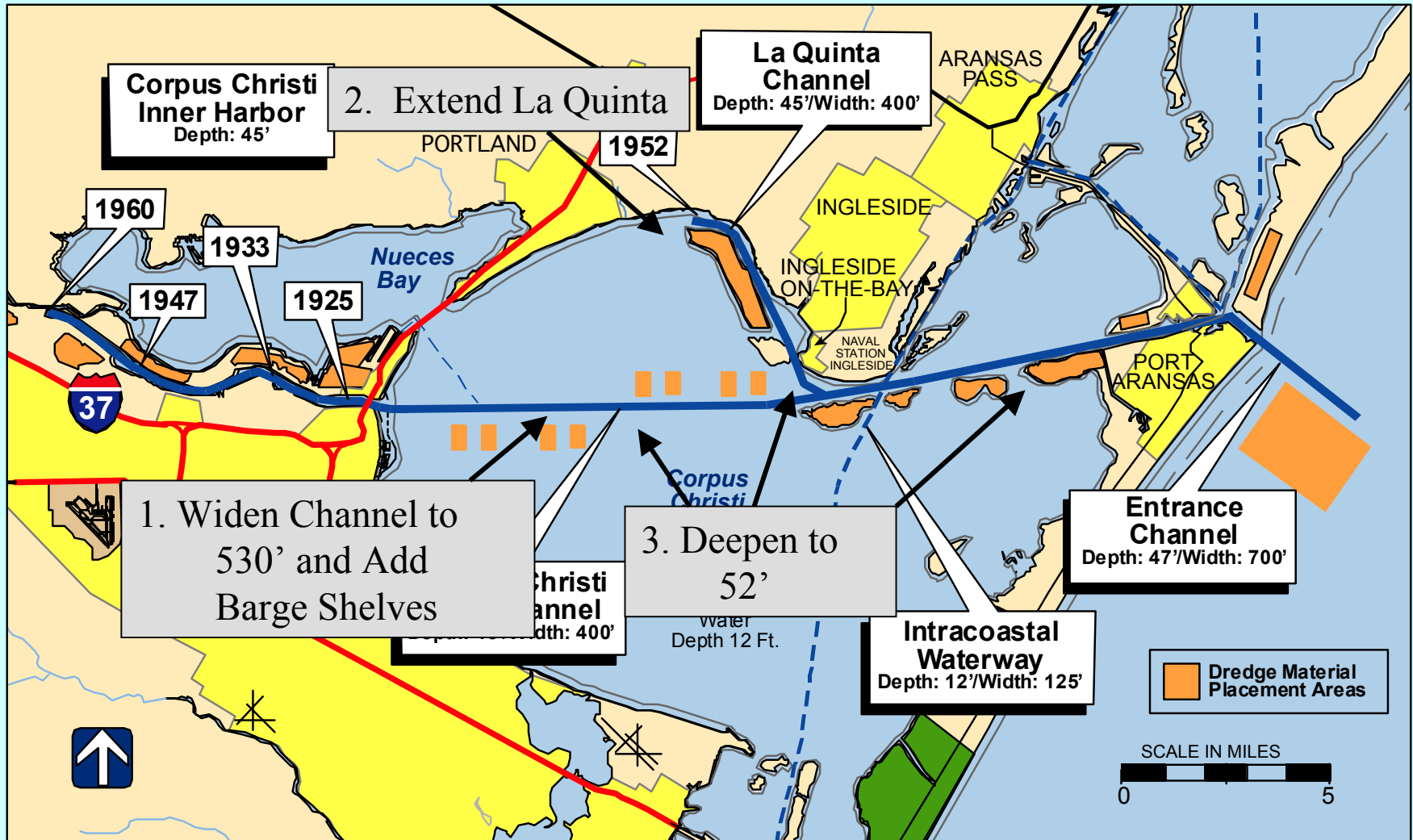
HISTORY OF CHANNEL DEEPENING



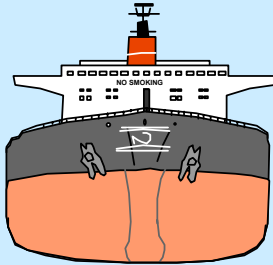
EXISTING CHANNEL LIMITATIONS



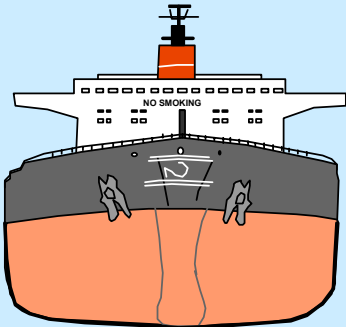
PROPOSED IMPROVEMENTS



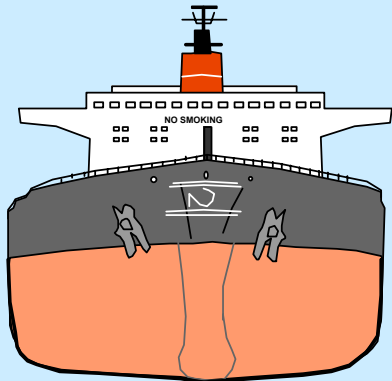
VESSEL SIZE INCREASING



1960s
Panama Canal
Max.
106' Beam
34' Draft

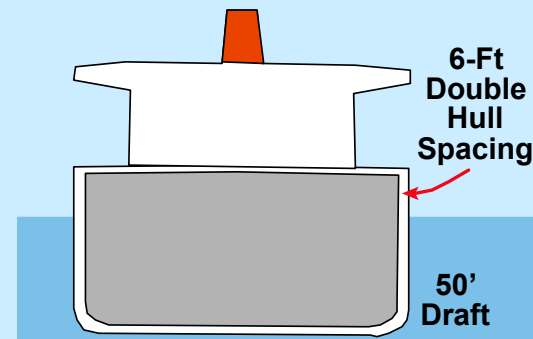


1980s
132' Beam
45' Draft

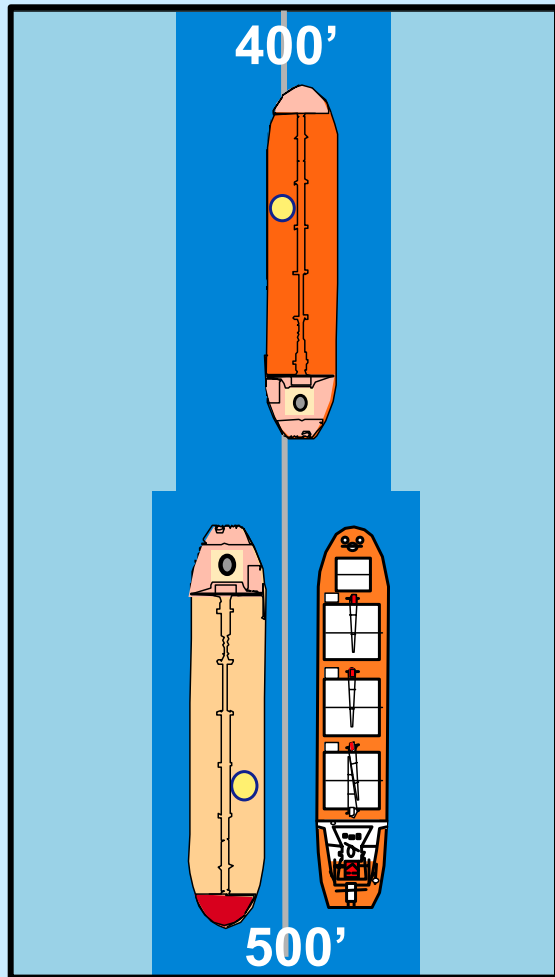


"Year 2000"
>160' Beam
>50' Draft

- World fleet getting bigger, draft and beam increasing
- Double-hull requirements make tankers wider
- Ships with design drafts over 45 feet already calling here

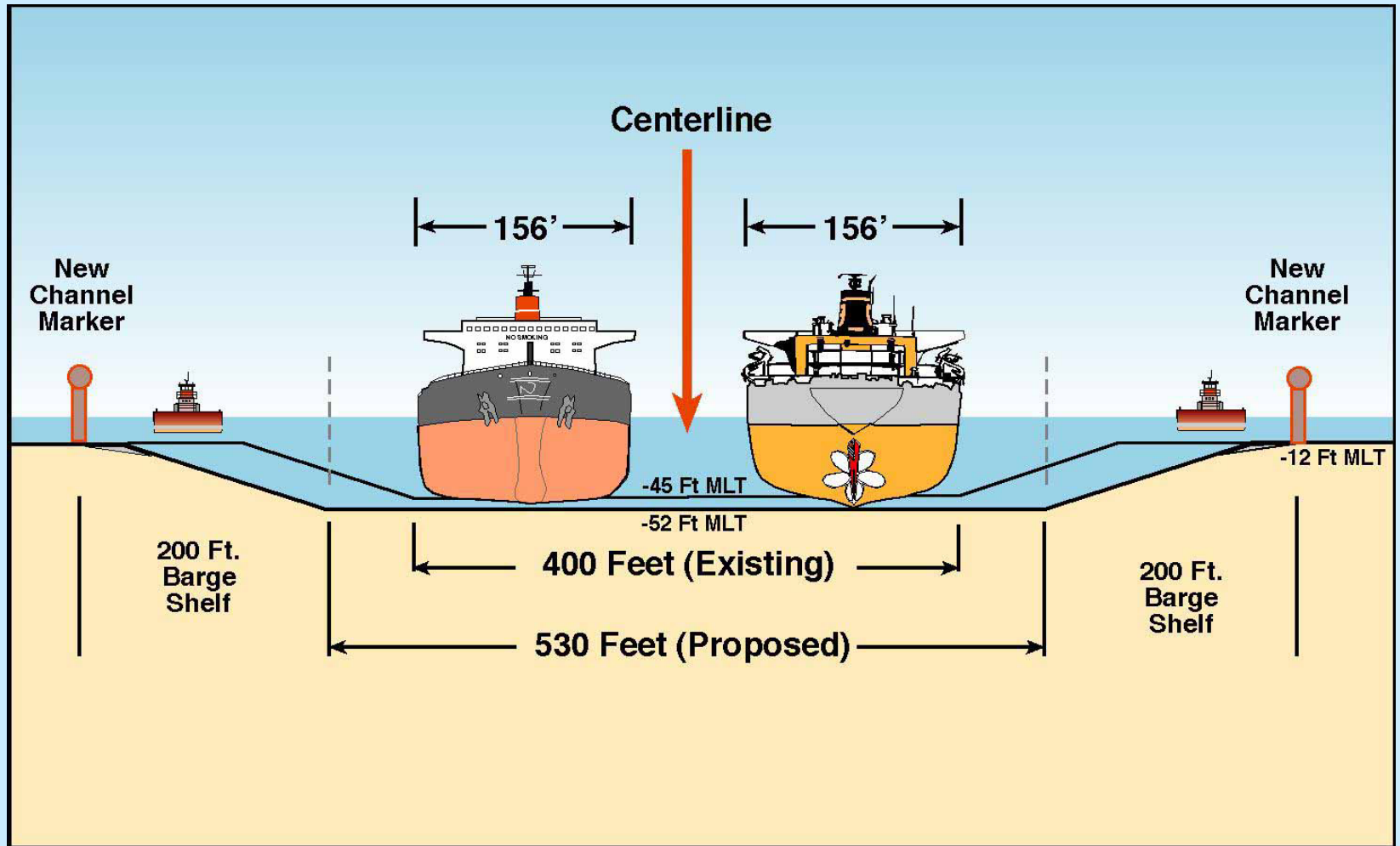


WIDENING TO ADDRESS SAFETY AND TO REDUCE COSTLY DELAYS



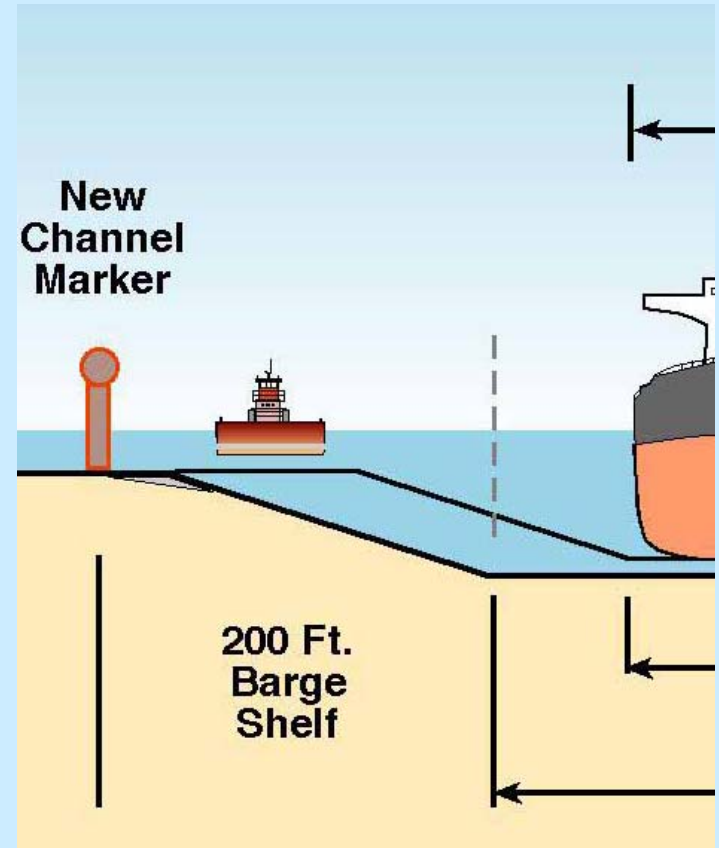
- Provides additional clearance between meeting vessels
- CC Bay crossing is 400 feet wide compared to 500 feet across Redfish Bay
- Combined beam width restriction is 251' for the 400' channel
- Combined beam width restriction is 317' for the 500' channel

CC BAY CROSSING - SECTION

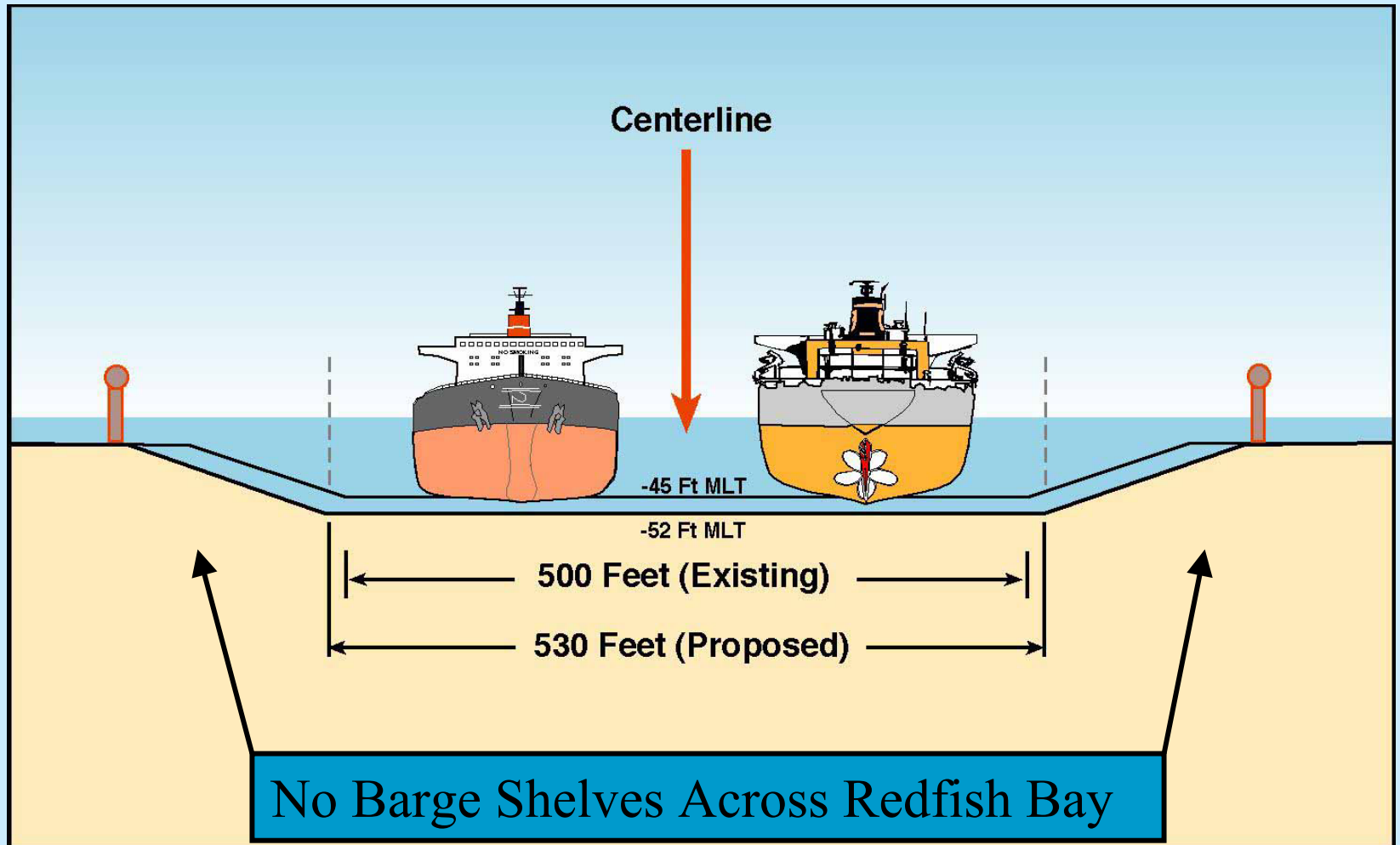


BARGE SHELVES

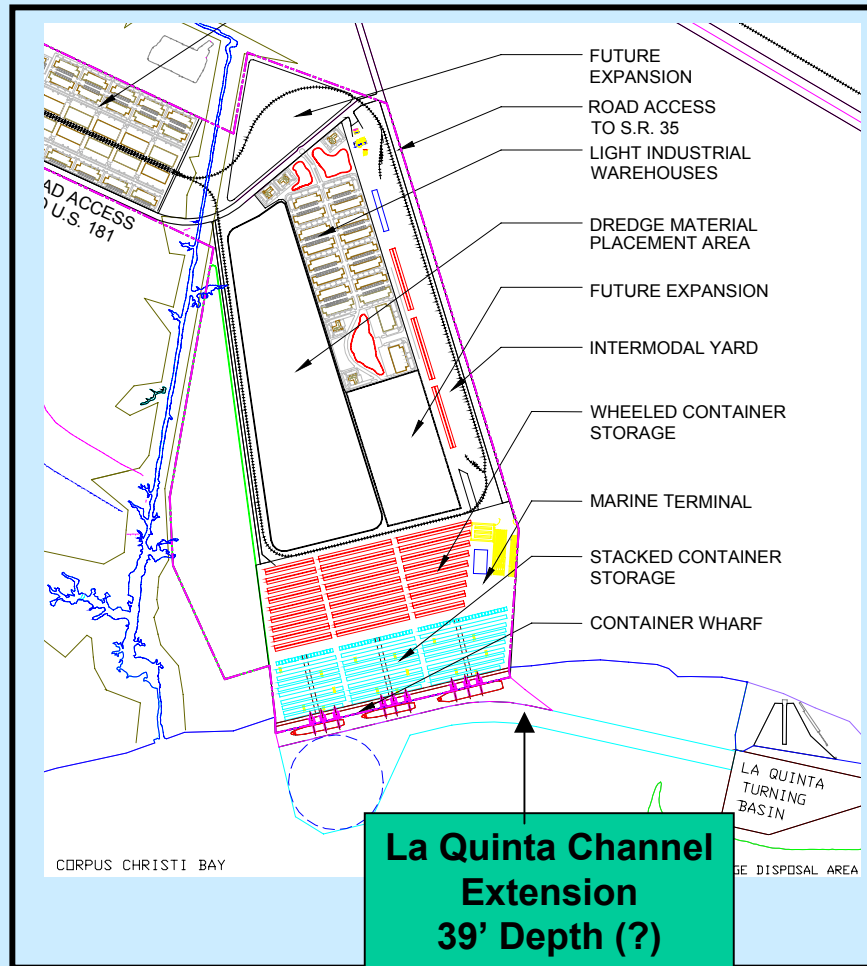
- Separate Barge and Ships
- Both Sides of Channel
- CC Bay Reach Only
- 12 Ft Deep, 200 Ft Wide



REDFISH BAY CROSSING -SECTION



LA QUINTA CHANNEL EXTENSION



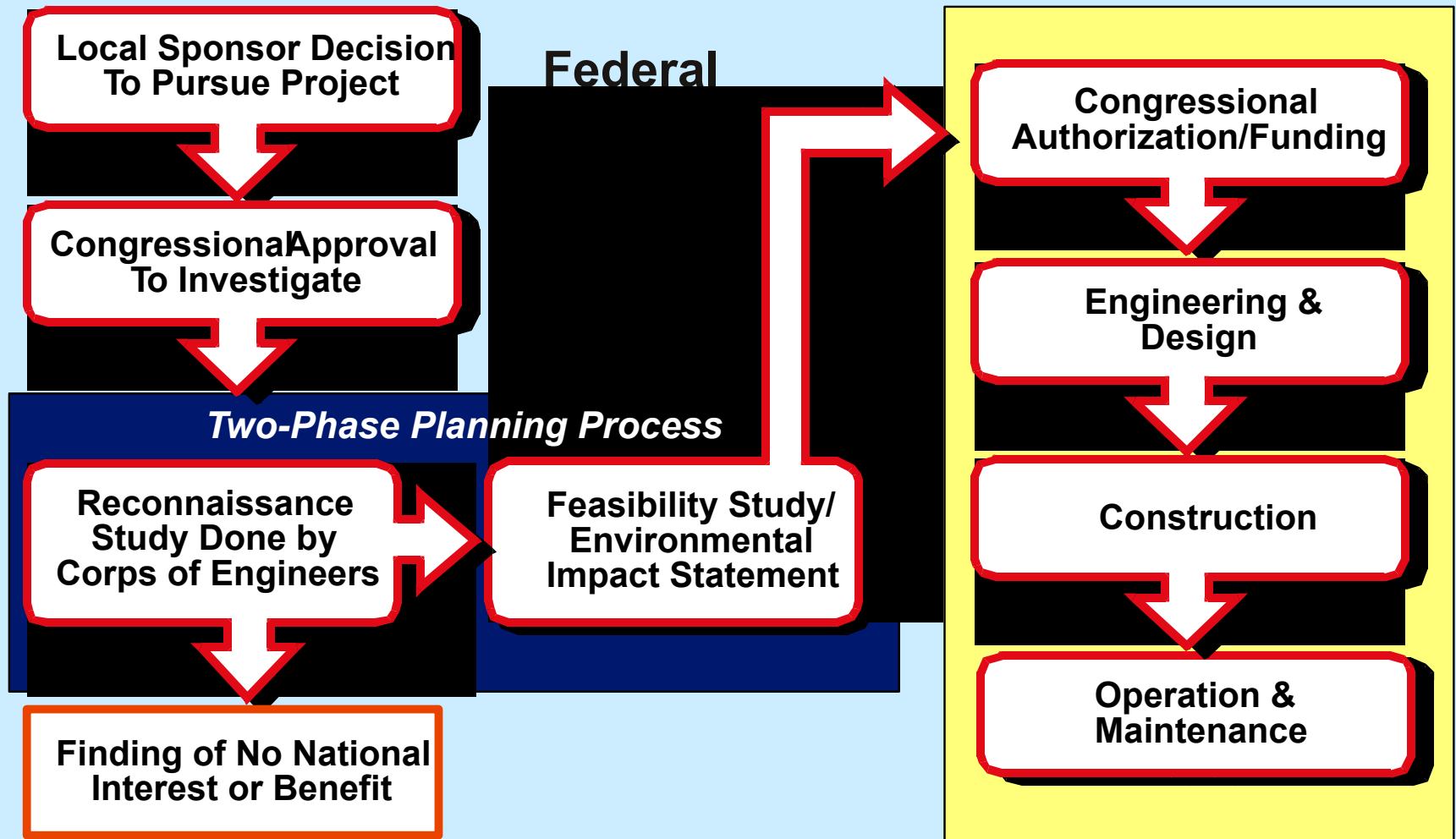
■ Site of future
*La Quinta
Trade Gateway*

■ Approx. Channel
Dimensions:

- 7,200 ft. long
- Turning Basin

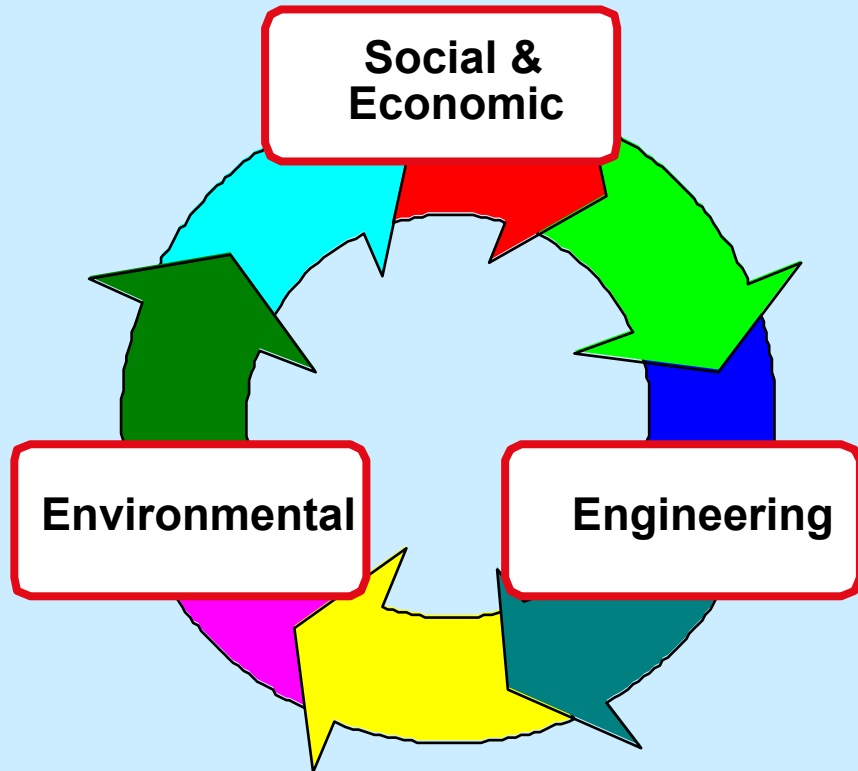
THE FEDERAL PLANNING PROCESS

COE - LEAD, PCCA - LOCAL SPONSOR



FEASIBILITY PHASE

Categories of Studies



- Authorized in 1990
- Reconnaissance Report in 1994
- Cost Share Agreement in June 1999
- Port and Corps equally sharing \$6.7 Million Cost
- Includes preparation of EIS
- Approx. 36 months to complete

ENGINEERING/ENVIRONMENTAL STUDIES

- Ship Simulation
- Geotechnical Analyses
- Dredge Quantities
- Shoaling Studies
- Cultural Resources
- Dredge Material Placement Plan
- Shoreline Erosion
- Hydrodynamic and Salinity Modeling
- Pipelines and Relocations

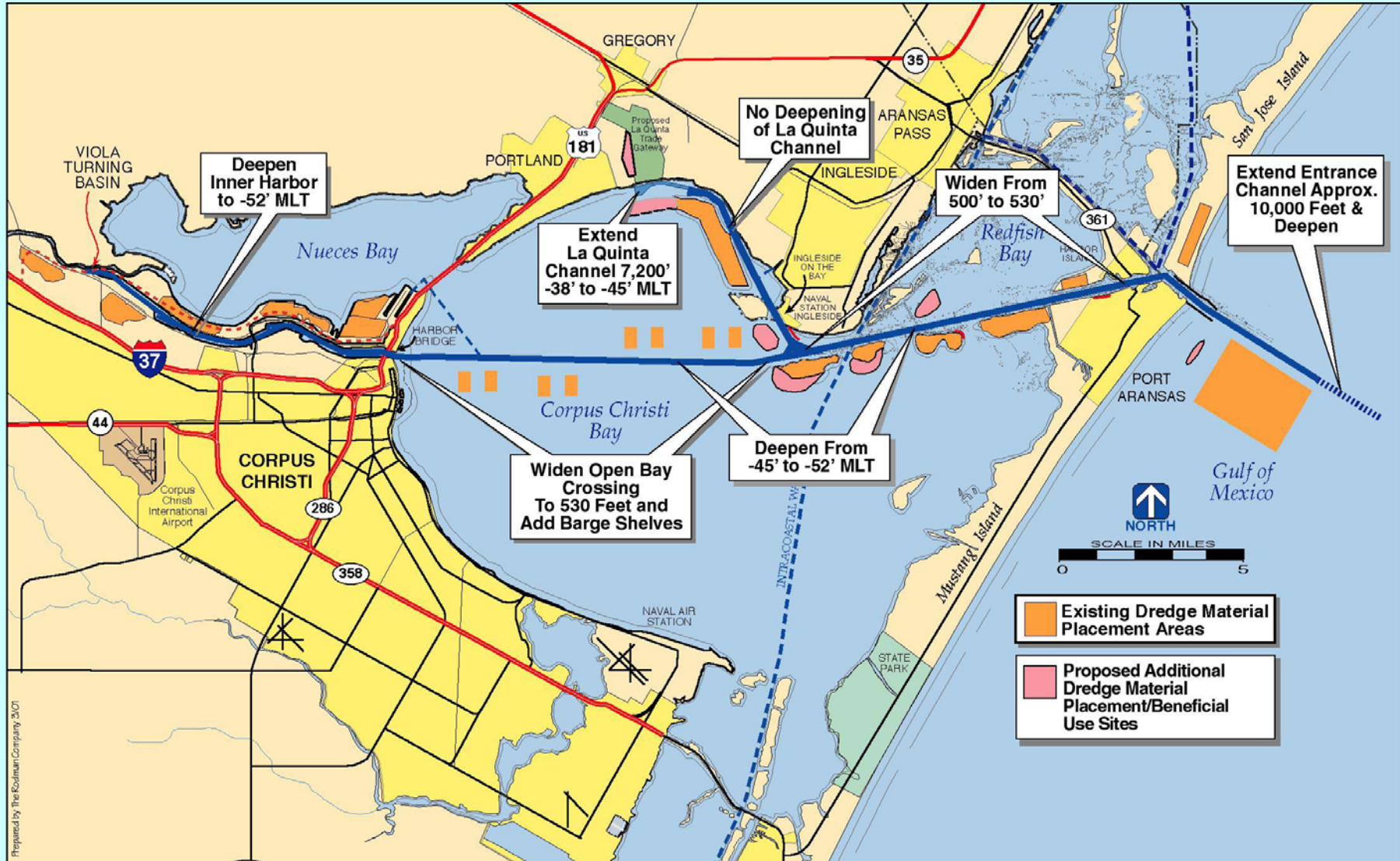
OTHER STUDIES

- Living Resources
- Species-Habitat Use
- Water and Sediment Quality
- Beneficial Uses of Dredge Material
- Mitigation
- Ballast Water Management
- Spill Control Strategies
- Cumulative Impacts
- Endangered Species
- Marine and Estuarine Resources (EFH)

STUDIES

- **Scope focused to address Local, Regional and National Concerns/Issues/Policies**
- **Strong Local Public Orientation and Focus (Coastal Bend Bays and Estuary Program & Extensive Public Involvement & Outreach)**
- **Extensive Regulatory Agency Involvement**

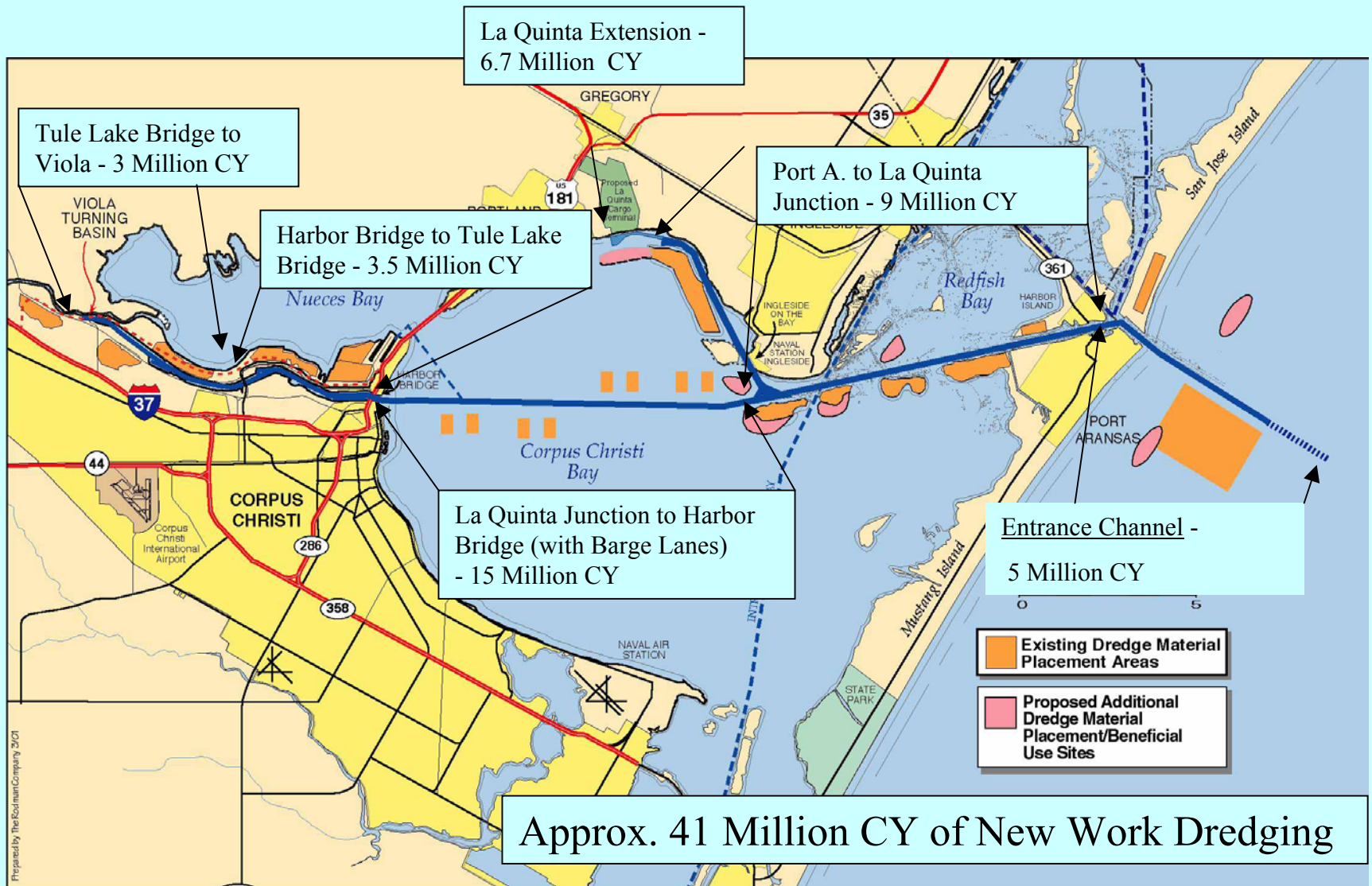
COE'S RECOMMENDED PLAN



BENEFIT TO COST RATIO

- Cost Estimate - COE's Recommended Plan
 \approx \$200 Million
- Transportations savings cost benefits provide a 3.5:1 benefit to cost ratio
- Economic Analyses Continue to Be Refined

NEW WORK DREDGING BY REACH



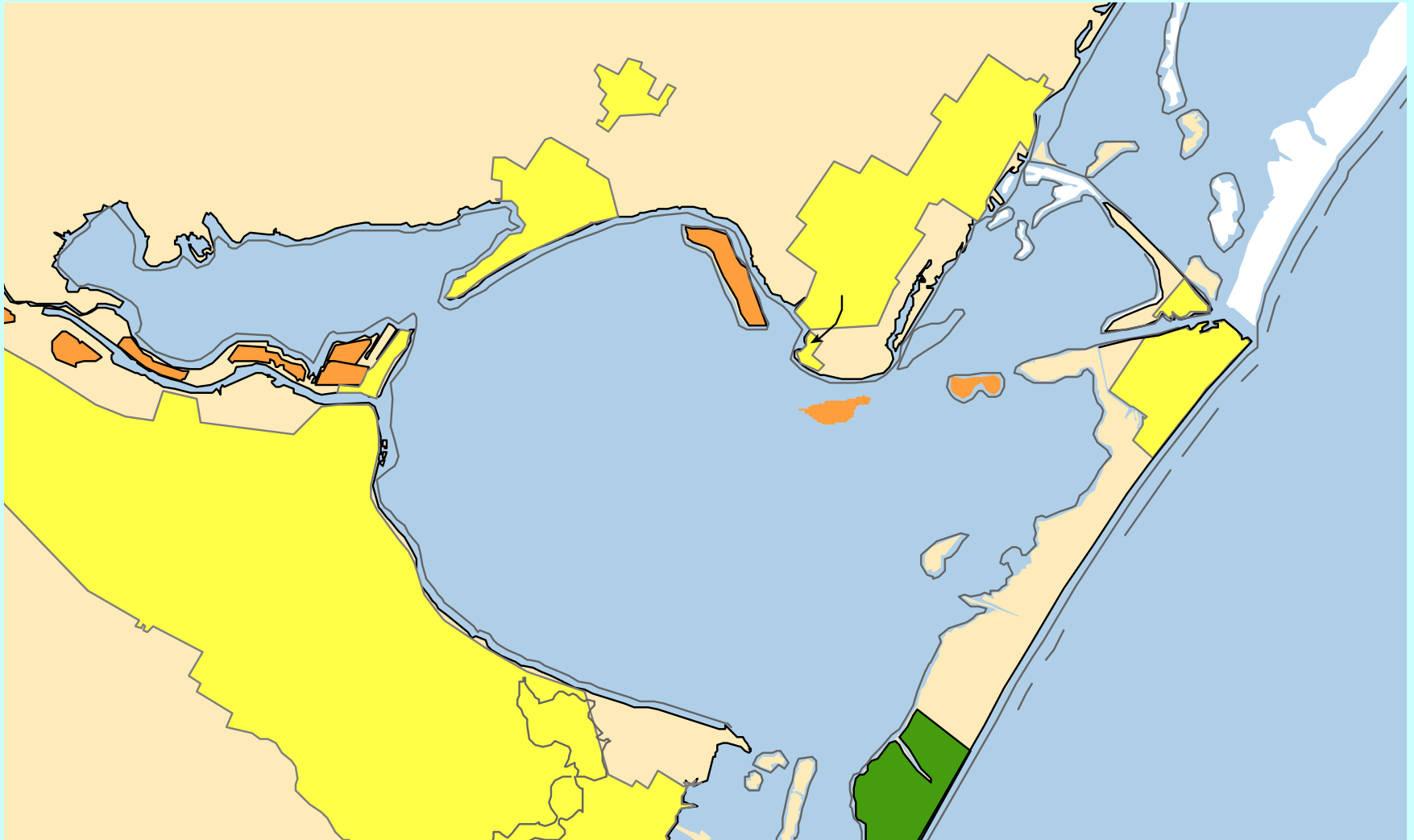
REQUIRED DREDGING QUANTITY

- New Work - Approx. 42 Million CY
- Maintenance
 - Currently \approx 3 Million CY Per Year
 - COE Estimates Increase to
 - 3.5 Million CY Per Year
 - Or 183 Million CY Over 50 Years
- Total of \approx 200+ Million CY Over 50 Yrs.
- Dredged Material Management/
Beneficial Use Plan

PROPOSED DMM/BU PLAN

- Purpose
- Review and Background
 - Existing Channel System
 - Planning Approach
- Proposed DMM/BU Plan
- Comments, Questions and Answers

EXISTING CHANNEL SYSTEM PLACEMENT AREAS

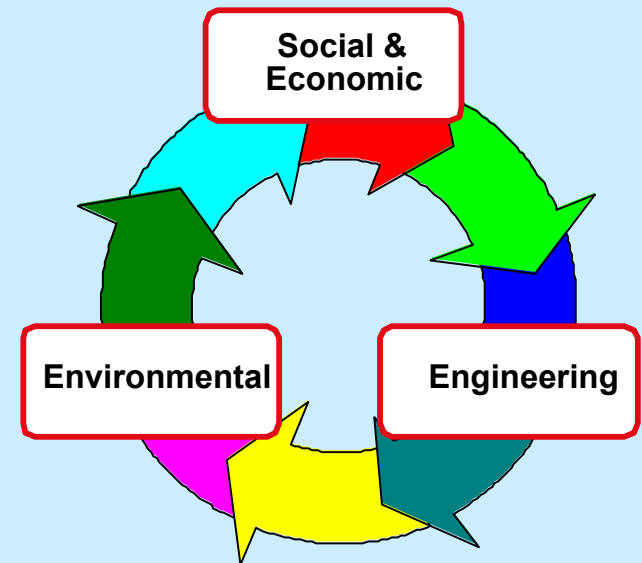


SO WHY INCORPORATE BENEFICIAL USE INTO THE DREDGED MATERIALS MANAGEMENT PLAN?

- **Federal, State and Port Policy**
- **Potential to Yield Net Positive Environmental Benefits**
- **Potentially at Similar Cost**
- **Public Acceptance**

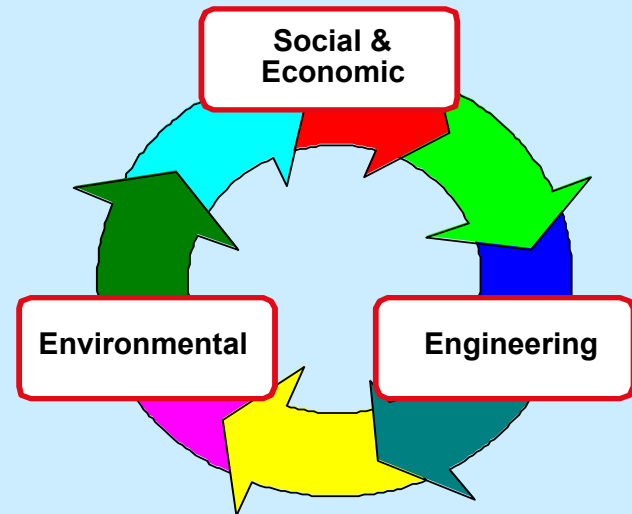
DMM/BU PLAN INTEGRATES ENGINEERING/ENVIRONMENTAL STUDIES AND PUBLIC INPUT

- **Geotechnical Analyses**
- **Dredge Quantities**
- **Shoaling Studies**
- **Shoreline Erosion**
- **Hydrodynamic and Salinity Modeling**
- **Water and Sediment Quality**
- **Species and Habitat Database**



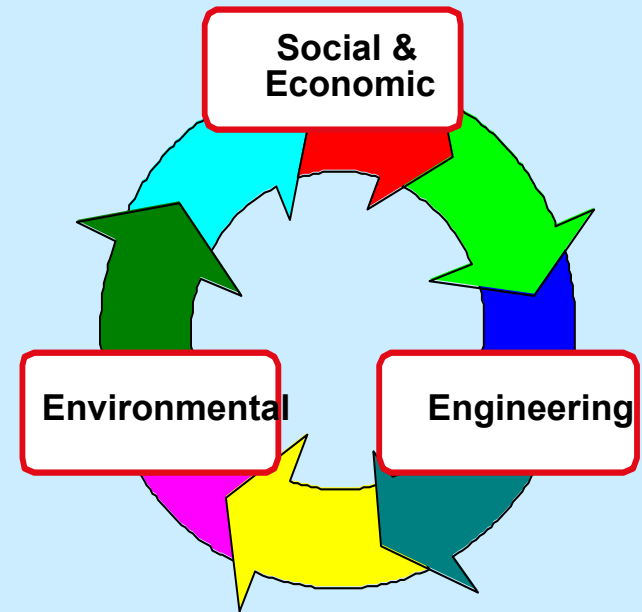
DMM/BU PLANNING

- Cumulative Impact
- Endangered Species
- Marine and Estuarine Resources
- Existing Infrastructure (e.g Pipelines, Channels)
- Mitigation Requirements
- Economics
- Public Involvement



EXTENSIVE PLAN COORDINATION

- **State, Federal and Local Agency Involvement**
 - 1994 through project
- **Public Participation**
 - CBBEP 1998 Plan
 - Public Forums/Public Ideas
 - Public Meetings



**US Army Corps
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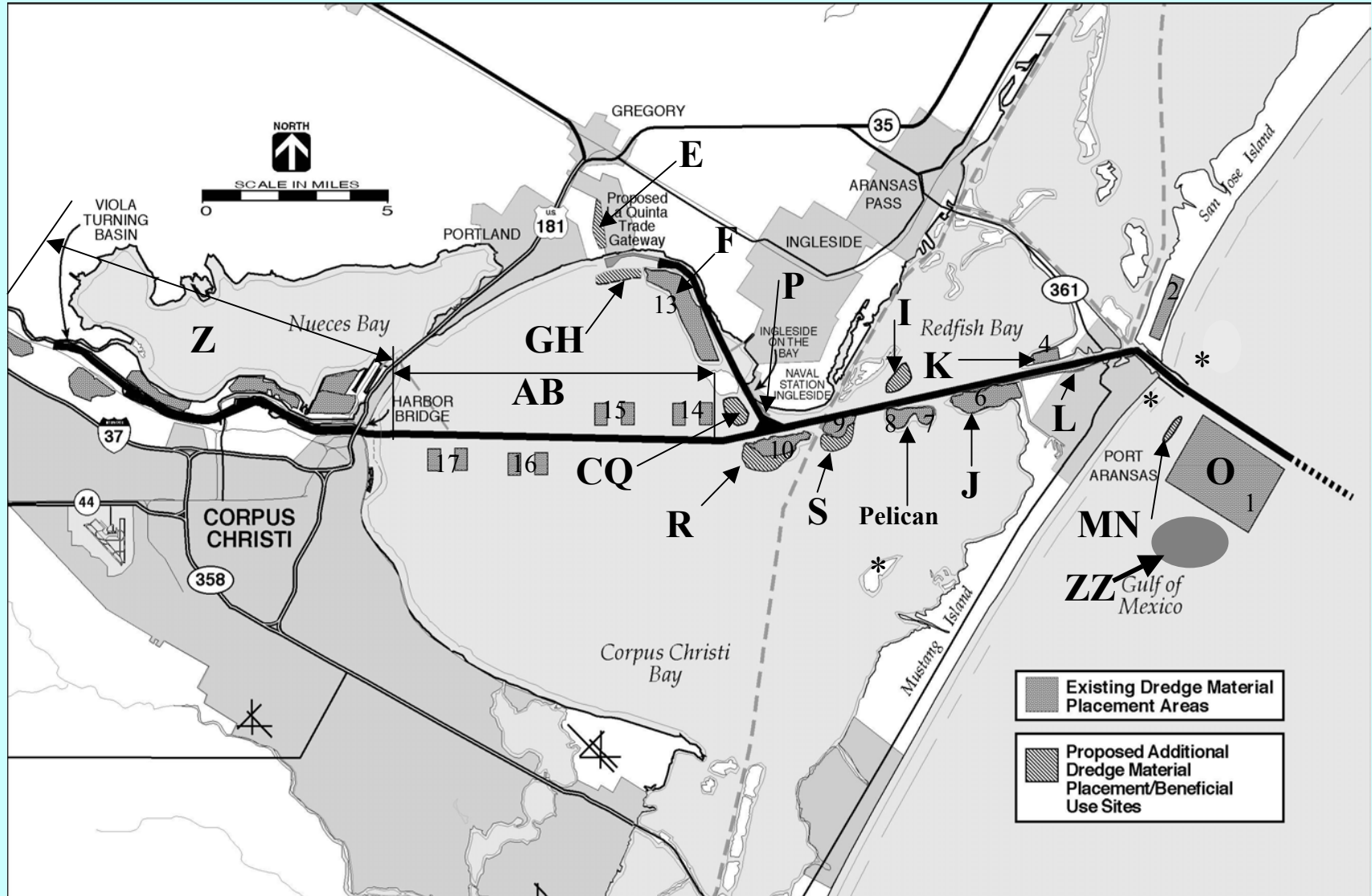
COE'S RECOMMENDED PLAN



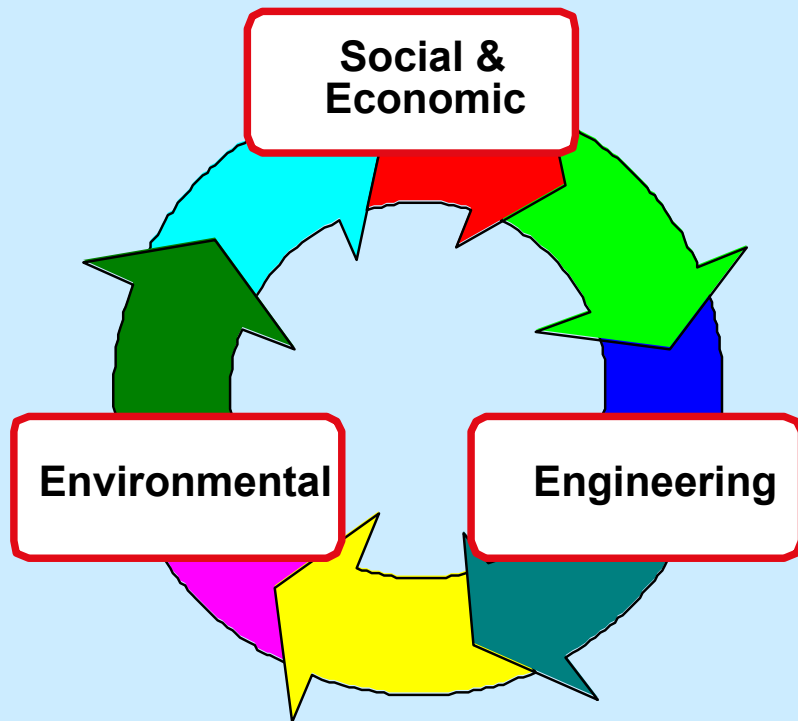
REQUIRED DREDGING QUANTITY

- **New Work - Approx. 42 Million CY**
- **Maintenance**
 - **Existing: about 3 Million CY per year**
 - **Proposed project: COE estimates increase to about 3.5 Million CY total per year, including La Quinta Extension**
 - **183 Million CY over 50 years**

PLACEMENT PLAN -NEW WORK AND MAINTENANCE

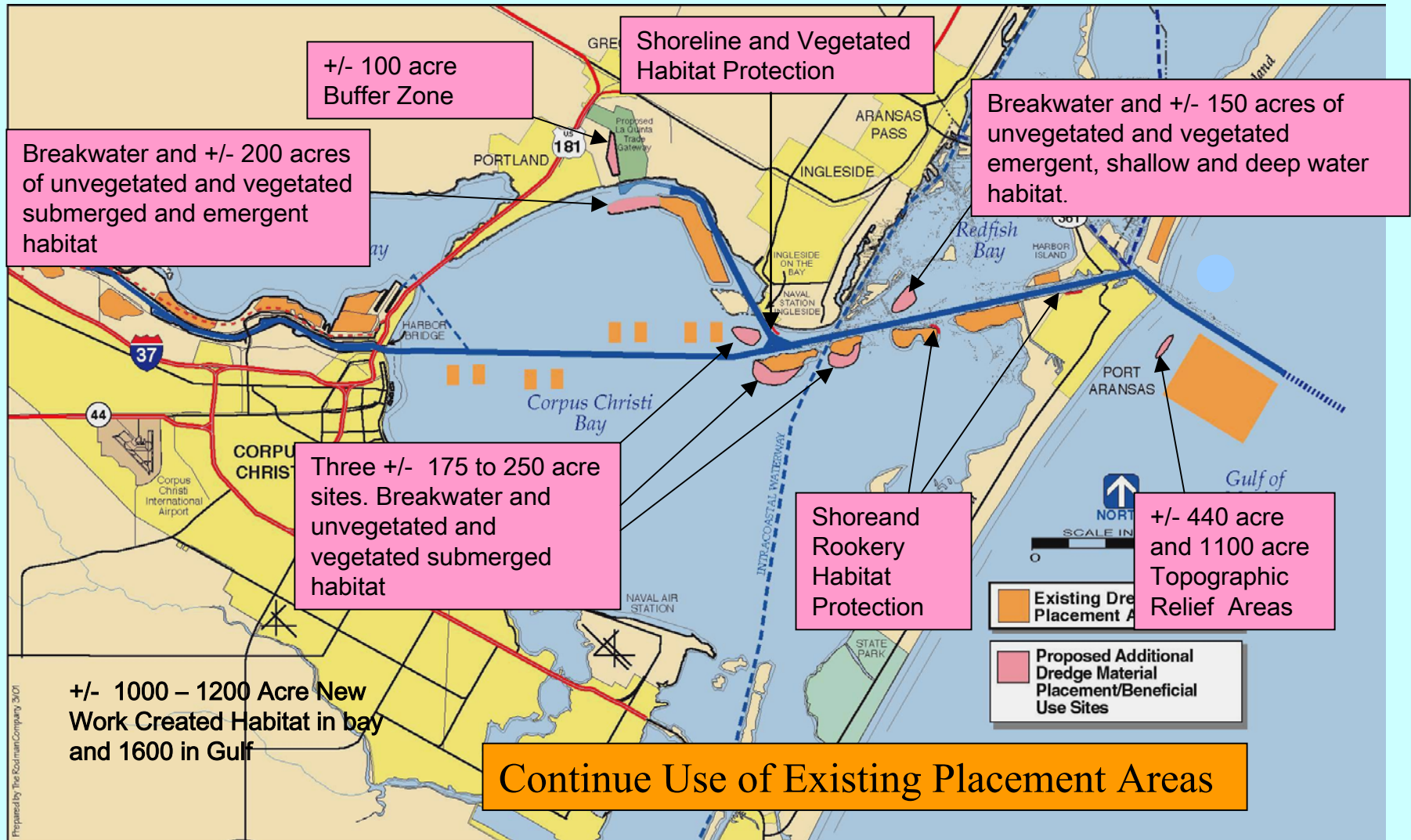


PROPOSED PROJECT ENVIRONMENTALLY SOUND?



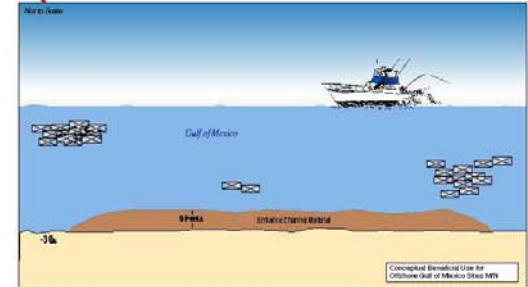
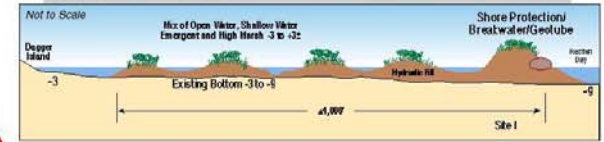
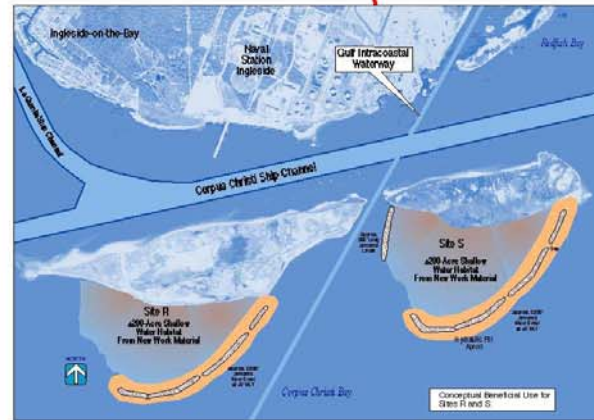
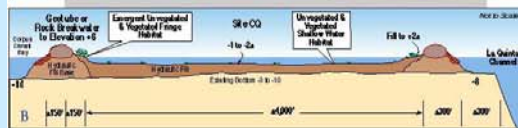
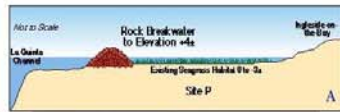
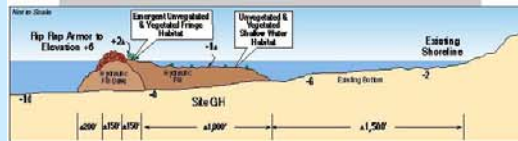
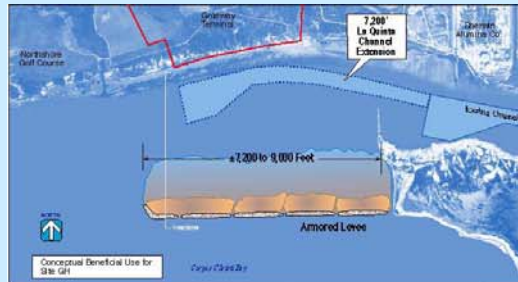
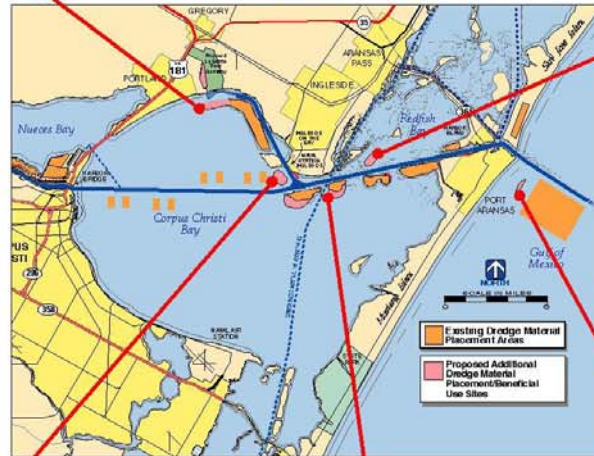
- **Proposal Developed by and Agreed to by Regulatory Agencies**
- **Public Input Throughout Process**
- **Provides Long-Term Environmental Benefit**
- **Continual Plan Improvement**

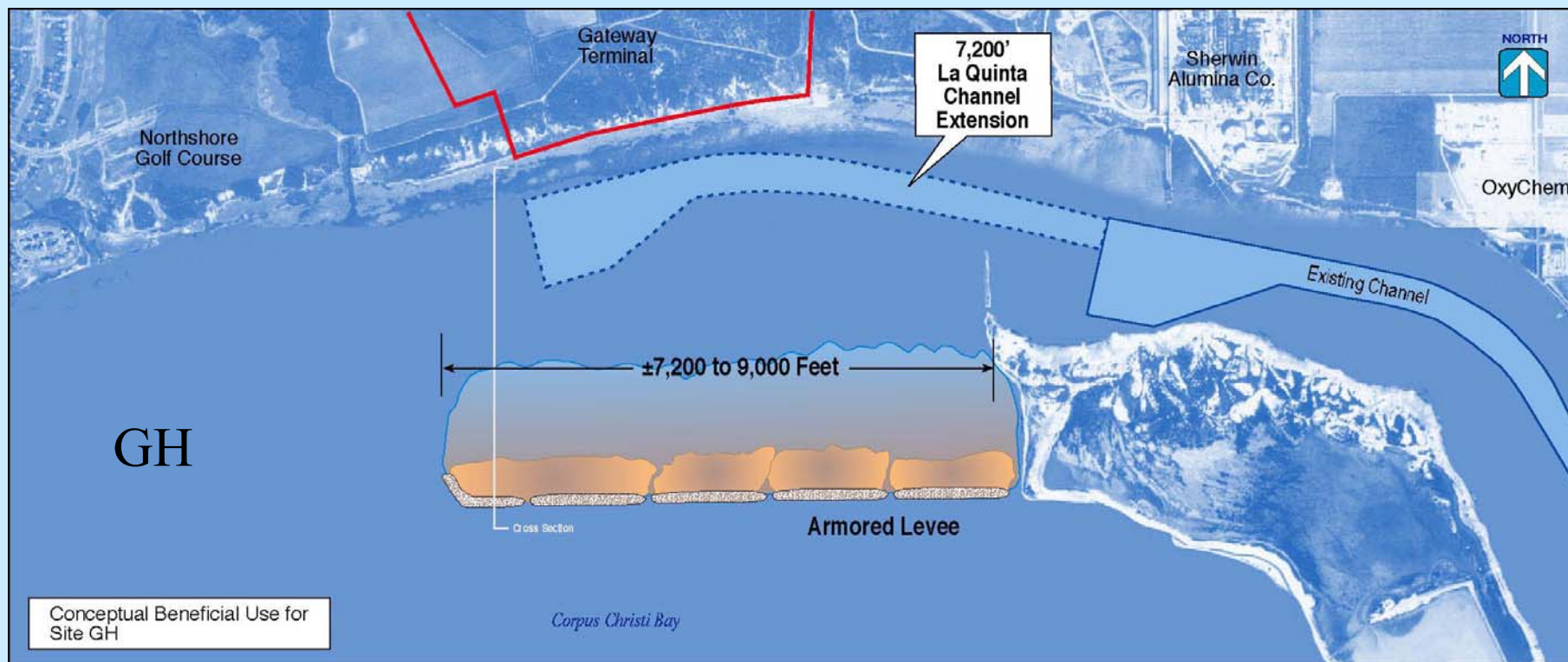
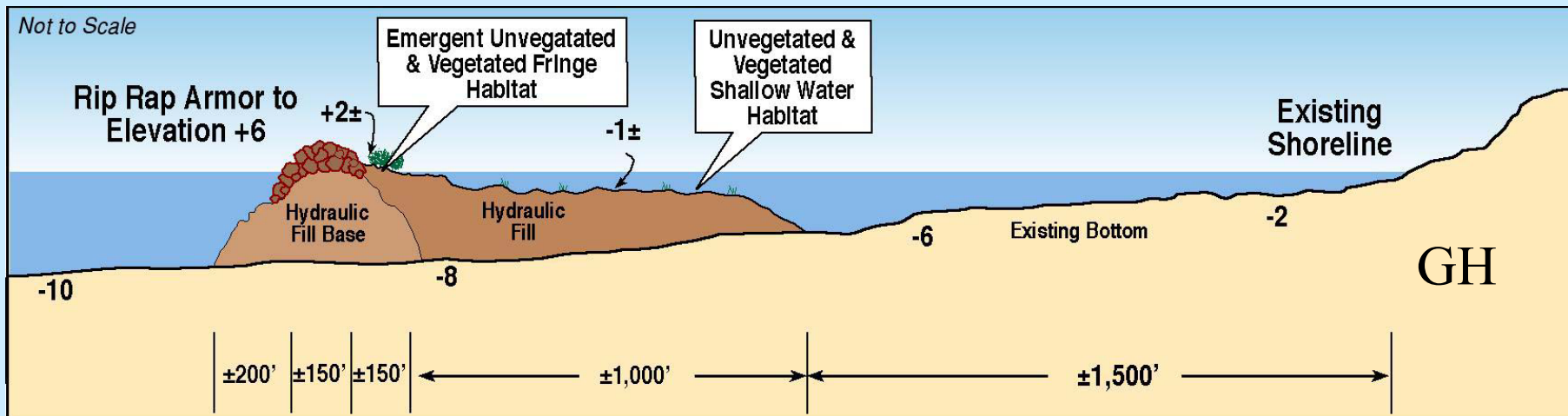
PROPOSED PLACEMENT PLAN - NEW WORK AND MAINTENANCE

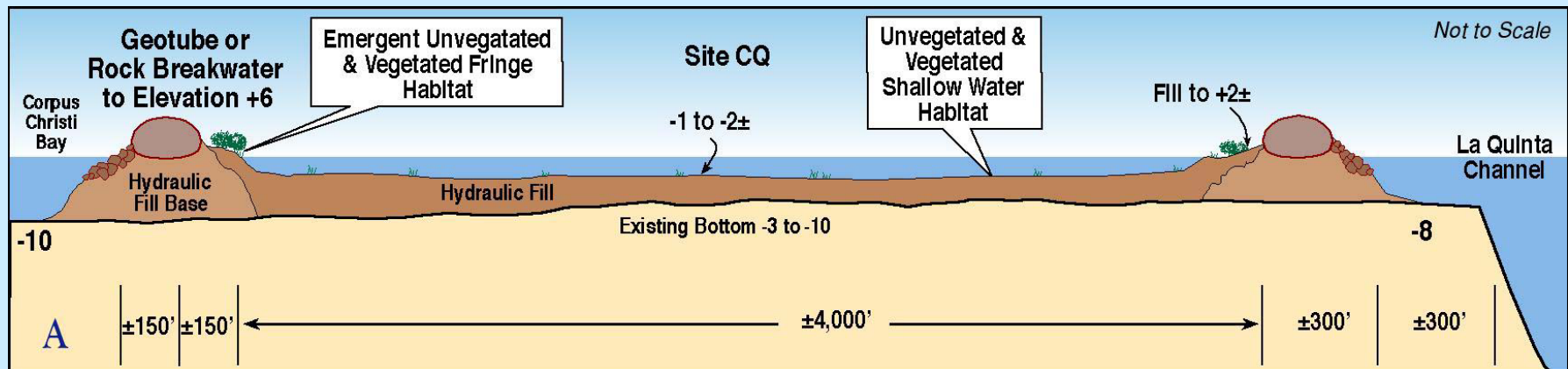


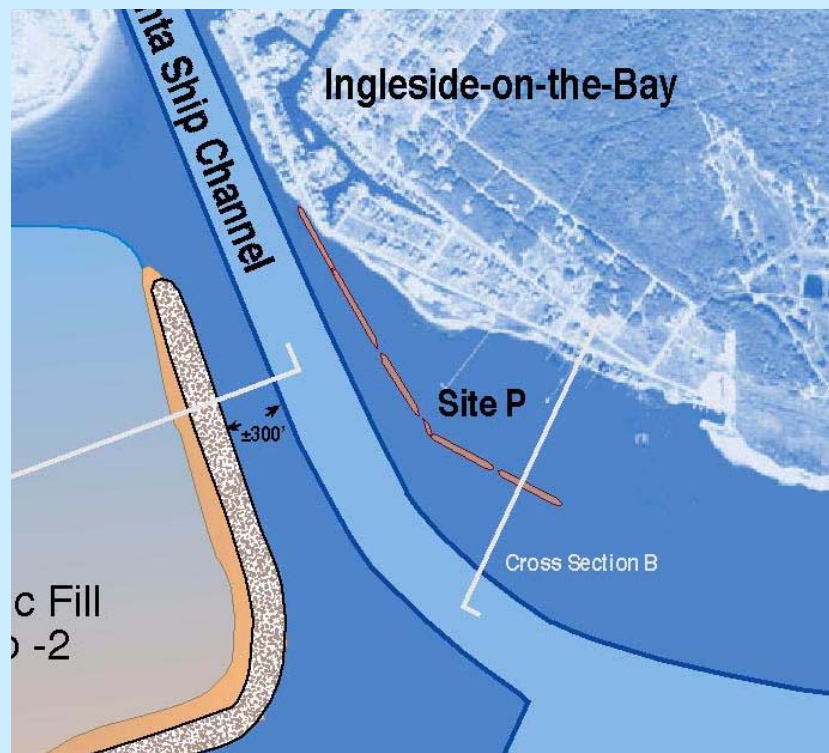
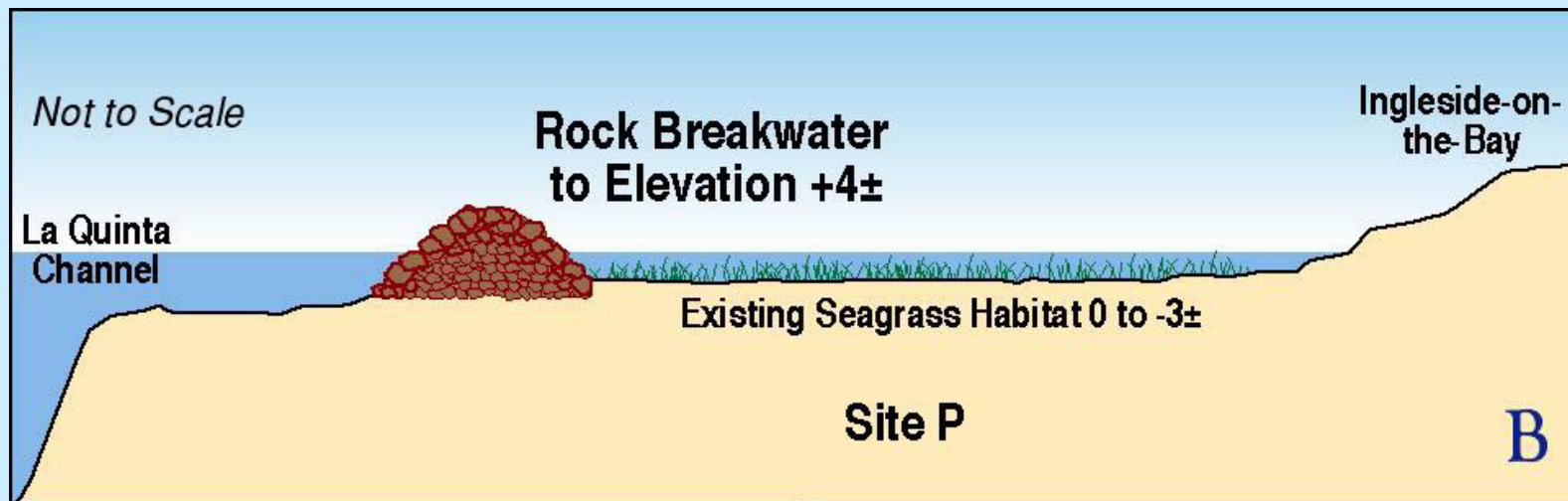
Corpus Christi Ship Channel CHANNEL IMPROVEMENT PROJECT

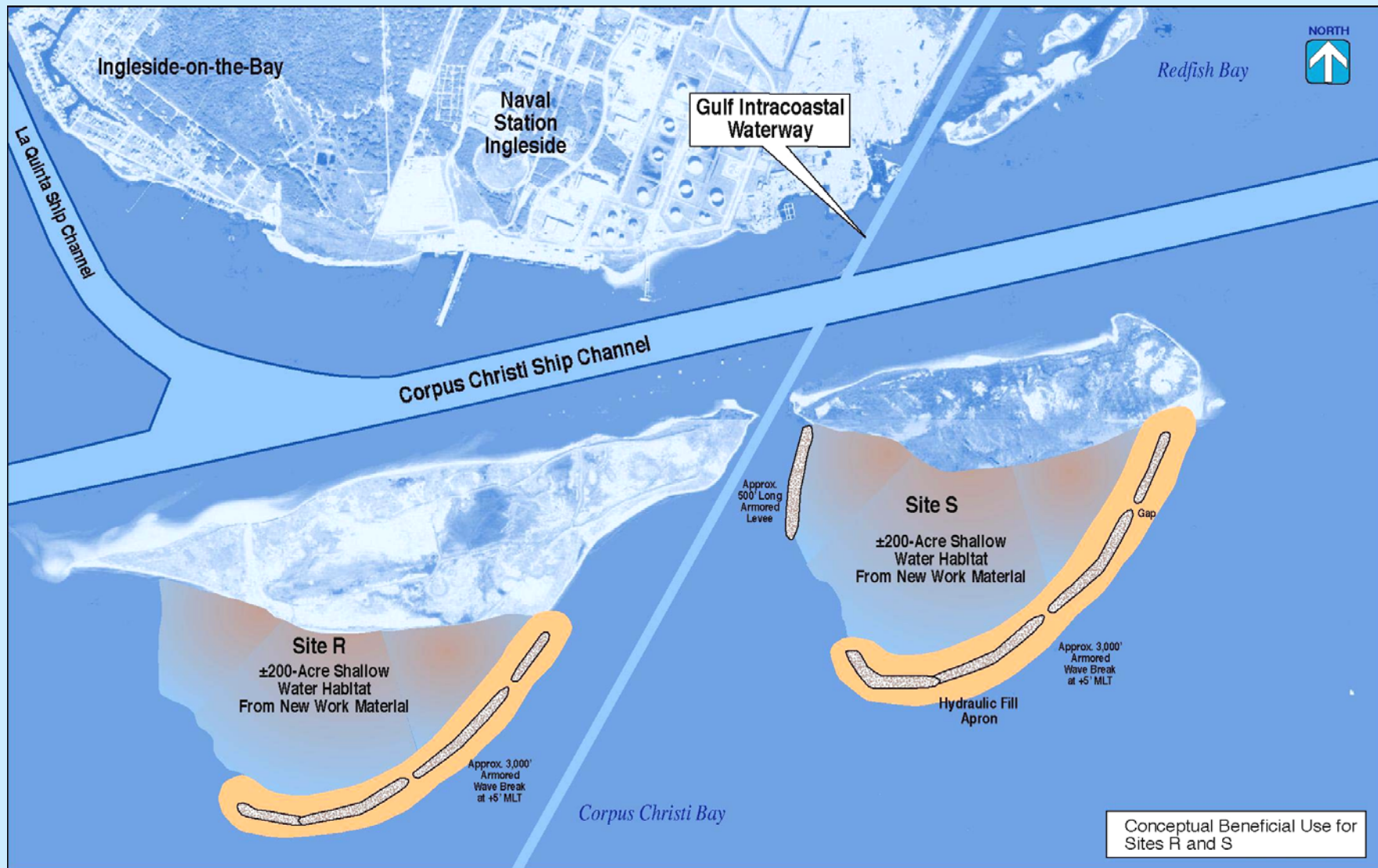
Highlights of the Proposed Dredge Material Management/Beneficial Use Plan April 2001

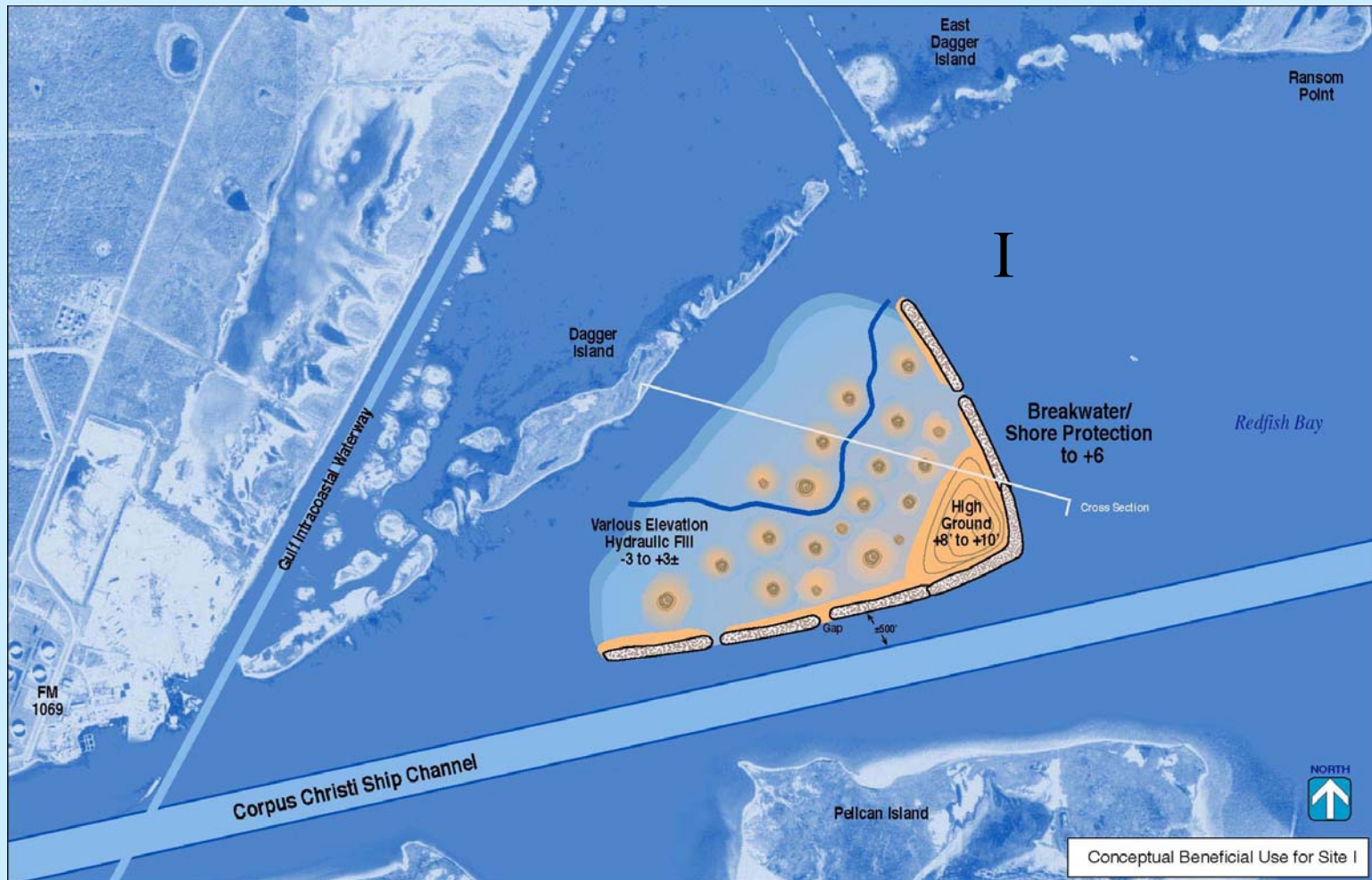
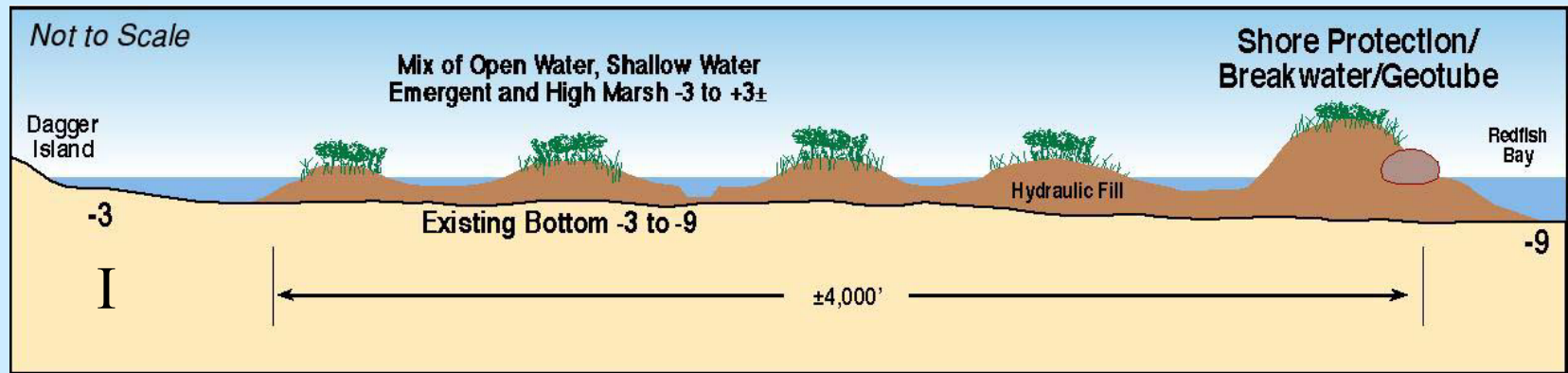




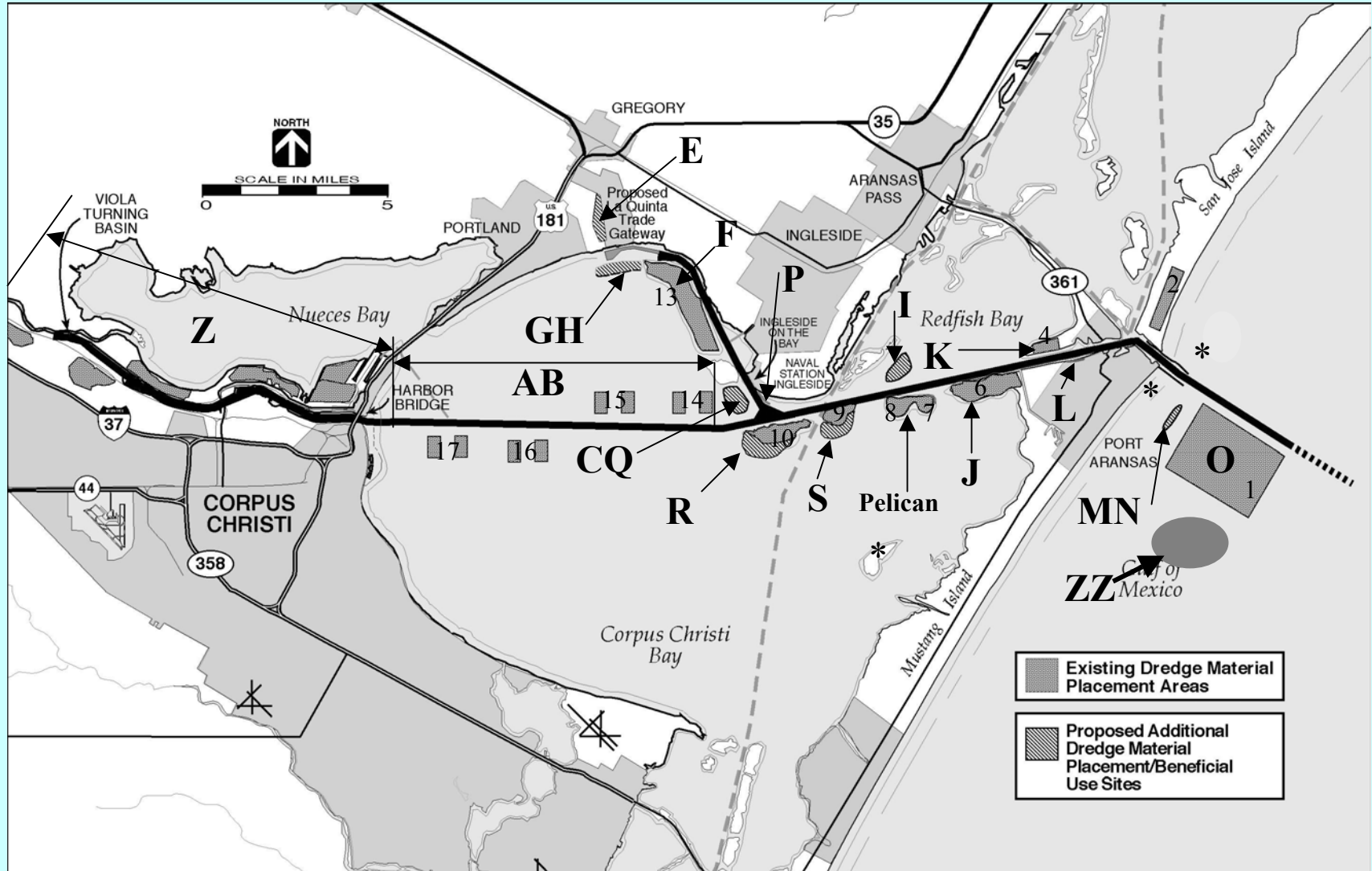




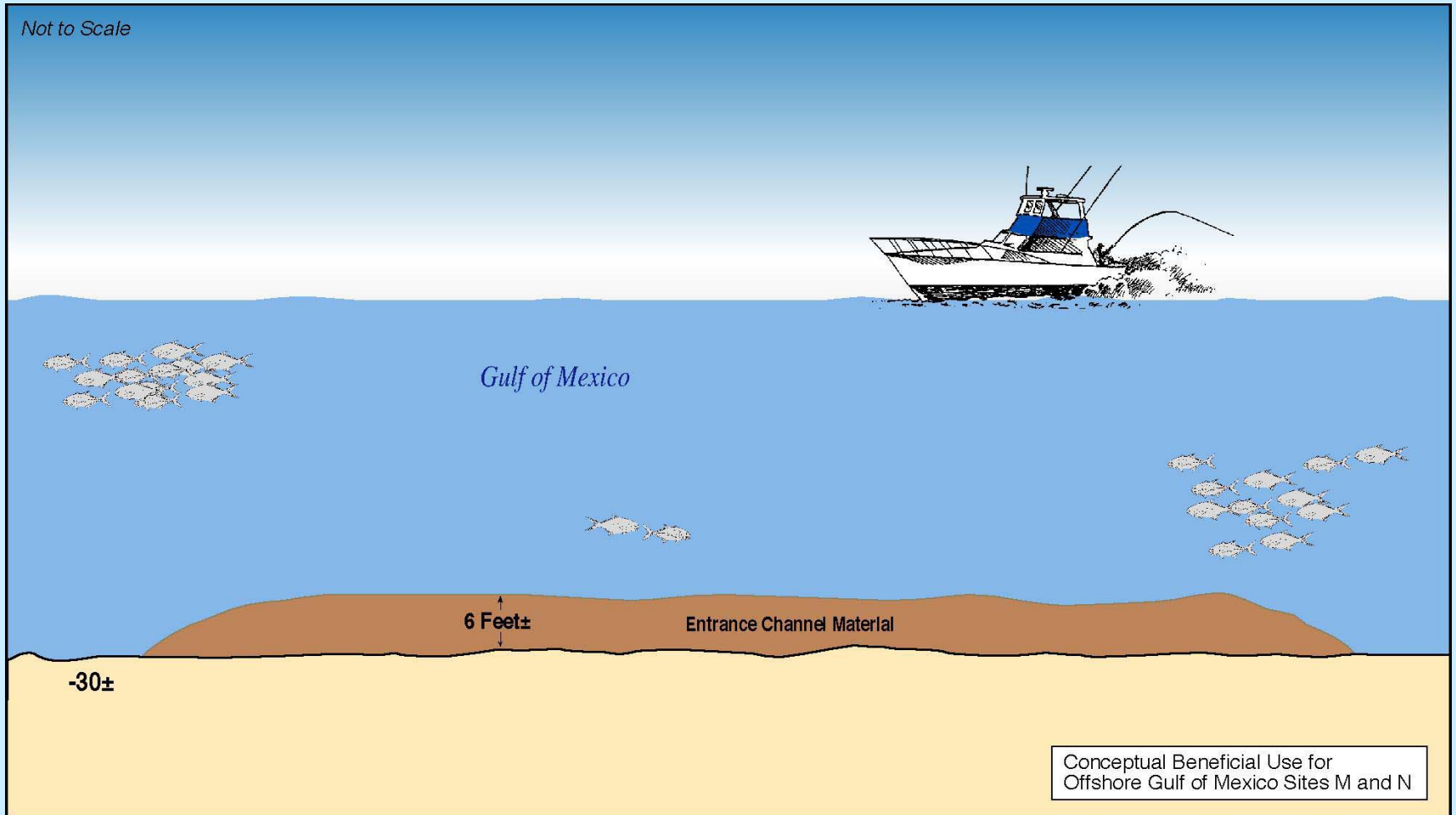




PLACEMENT PLAN -NEW WORK AND MAINTENANCE



TOPOGRAPHIC BERMS



REQUIRED MITIGATION

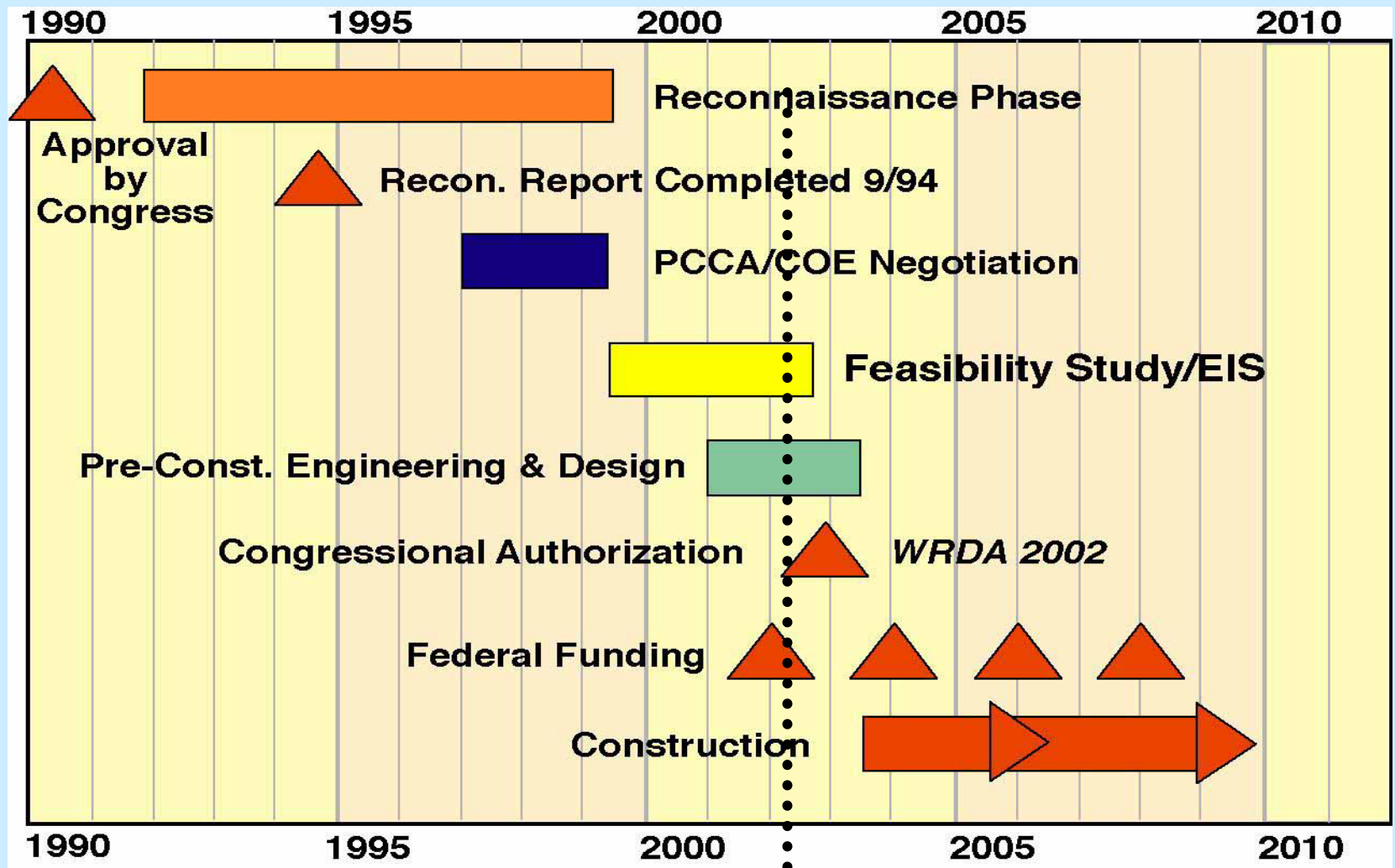
- **Mitigation Required by Agencies for Project Direct Impacts:**
 - **Plant 15 acres of seagrass habitat**
 - **Create 40 acres of shallow water habitat less than –4ft MLT**

Total 55 acres

HABITAT CREATION, ENHANCEMENT, AND PROTECTION ACREAGES

- **In Bay Shallow Water and Emergent Habitats
+/- 900 – 1000 acres**
- **In Bay Rock Habitat +/- 19,000 linear feet**
- **Gulf of Mexico Topographic Relief
+/- 1000 – 1600 acres**
- **Terrestrial Buffer Habitat +/- 100 acres**
- **Multiple acres of Existing Habitat Protected or
enhanced by Plan Features**

PROJECT SCHEDULE



Corpus Christi Ship Channel

Channel Improvement Project

Questions and Answers



**US Army Corps
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